

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,221,633 C1  
APPLICATION NO. : 09/099307  
DATED : May 22, 2007  
INVENTOR(S) : Johann Ertl et al.

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1, lines 31-35, "(A1-A5) are the amino acid residues in the positions A1 to A5 of the A chain of human insulin [or animal insulin]," should read --(A1-A5) are the amino acid residues in the position A1 to A5 of the A chain of human insulin or animal insulin,--.

Column 2, after line 26, please insert

--in which

(A1-A5) are the amino acid residues in the positions A1 to A5 of the A chain of human insulin [or animal insulin],

(A12-A19) are the amino acid residues in the positions A12 to A19 of the A chain of human insulin or animal insulin,

A21 is Asn, Asp, Gly, Ser, Thr, or Ala,

(B8 - B18) are the amino acid residues in the positions B8 to B18 of the B chain of human insulin or animal insulin,

(B20-B26) are the amino acid residues in the positions B20 to B26 of the B chain of human insulin or animal insulin,

A8, A9, A10 are the amino acid residues in the positions A8, A9, and A10 of the A chain of human insulin or animal insulin,

B30 is -OH or the amino acid residue in portion B30 of the B chain of human insulin or animal insulin,

B1 is a phenylalanine residue (Phe) or a hydrogen atom,

B3 is a naturally occurring basic amino acid residue,

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,221,633 C1  
APPLICATION NO. : 09/099307  
DATED : May 22, 2007  
INVENTOR(S) : Johann Ertl et al.

Page 2 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

B27, B28 and B29 are the amino acid residues in the positions B27, B28, B29 of the B chain of human insulin or animal insulin, or in each case are another naturally occurring amino acid residue, where at least one of the amino acid residues in the positions B27, B28, and B29 of the B chain is replaced by another naturally occurring amino acid residue which is selected from the group consisting of the neutral or acidic amino acids.

Signed and Sealed this

Twenty-third Day of October, 2007

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looped initial "J" and a distinct "D".

JON W. DUDAS  
*Director of the United States Patent and Trademark Office*